SEQUENCE LISTING

(1) GENERAL INFORMATION:

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  (ii) TITLE OF INVENTION: Treatment of Obesity

  (iii) NUMBER OF SEQUENCES: 33

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  (v) COMPUTER READABLE FORM:
      (A) MEDIUM TYPE: Floppy disk
      (B) COMPUTER: IBM PC compatible
      (C) OPERATING SYSTEM: PC-DOS/MS-DOS
      (D) SOFTWARE: PatentIn Release #1.0, Version #1.25

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      (B) FILING DATE:

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(2) INFORMATION FOR SEQ ID NO: 1:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear or cyclic

    (ii) MOLECULE TYPE: peptide

    (xi) SEQUENCE DESCRIPTION: hGH 177-191

Leu Arg Ile Val Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 2:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 17 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear or cyclic

    (ii) MOLECULE TYPE: peptide

    (xi) SEQUENCE DESCRIPTION:

$\underline{X1m}$ Leu Arg Ile Val Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Phe $\underline{X^2n}$
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 3:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear or cyclic

    (ii) MOLECULE TYPE: peptide

    (xi) SEQUENCE DESCRIPTION:

$\underline{Y^1}$ Leu Arg Ile Val Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Phe
    1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 4:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear or cyclic

    (ii) MOLECULE TYPE: peptide

    (xi) SEQUENCE DESCRIPTION:

Leu Arg Ile Val Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Phe Y2
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 5:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: peptide

    (xi) SEQUENCE DESCRIPTION: hGH 177-191 with Cys(Acm) at 182 and 189

Leu Arg Ile Val Gln Cys(Acm) Arg Ser Val Glu Gly Ser Cys(Acm) Gly
Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 6:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

    (ii) MOLECULE TYPE: peptide

    (xi) SEQUENCE DESCRIPTION: hGH 177-191 with Lys at 179

Leu Arg Lys Val Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 7:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

    (ii) MOLECULE TYPE: peptide

    (xi) SEQUENCE DESCRIPTION: hGH 177-191 with $CONH_2$ replacing COOH

Leu Arg Ile Val Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Phe -$\underline{CONH_2}$
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 8:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

    (ii) MOLECULE TYPE: peptide

    (xi) SEQUENCE DESCRIPTION:hGH 177-191 with CH_3CO-HN replacing NH_2

$\underline{CH_3CO-HN}$ Leu Arg Ile Val Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Phe
            1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 9:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

    (ii) MOLECULE TYPE: peptide

    (xi) SEQUENCE DESCRIPTION: hGH 177-191 with Ala at 183

Leu Arg Ile Val Gln Cys $\underline{Ala}$ Ser Val Glu Gly Ser Cys Gly Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO:10:

     (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 15 amino acids
          (B) TYPE: amino acid
          (C) STRANDEDNESS: single
          (D) TOPOLOGY: cyclic

     (ii) MOLECULE TYPE: peptide

     (xi) SEQUENCE DESCRIPTION: hGH 177-191 with Lys at 183

     Leu Arg Ile Val Gln Cys Lys Ser Val Glu Gly Ser Cys Gly Phe
     1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 11:

     (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 15 amino acids
          (B) TYPE: amino acid
          (C) STRANDEDNESS: single
          (D) TOPOLOGY: bicyclic

     (ii) MOLECULE TYPE: peptide

     (xi) SEQUENCE DESCRIPTION: hGH 177-191 with Lys at 183 and amide
                                 bond between 183 and 186

                          | |
     Leu Arg Ile Val Gln Cys Lys Ser Val Glu Gly Ser Cys Gly Phe
     1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 12:

     (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 15 amino acids
          (B) TYPE: amino acid
          (C) STRANDEDNESS: single
          (D) TOPOLOGY: cyclic

     (ii) MOLECULE TYPE: peptide

     (xi) SEQUENCE DESCRIPTION:hGH 177-191 with H replacing NH_2

     H   Leu Arg Ile Val Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Phe
         1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 13:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: peptide

    (xi) SEQUENCE DESCRIPTION: hGH 177-191 with Cys(SH) at 182 and 189

Leu Arg Ile Val Gln Cys(SH) Arg Ser Val Glu Gly Ser Cys(SH) Gly Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 14:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

    (ii) MOLECULE TYPE: peptide

    (xi) SEQUENCE DESCRIPTION: hGH 177-191 with D-Ala at 187 and 190

Leu Arg Ile Val Gln Cys Arg Ser Val Glu D-Ala Ser Cys D-Ala Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 15:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

    (ii) MOLECULE TYPE: peptide

    (xi) SEQUENCE DESCRIPTION: hGH 177-191 with Pen at 182 and 189

Leu Arg Ile Val Gln Pen Arg Ser Val Glu Gly Ser Pen Gly Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 16:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

    (ii) MOLECULE TYPE: peptide

    (xi) SEQUENCE DESCRIPTION: hGH 177-191 with Ala at 191

Leu Arg Ile Val Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Ala
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 17:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

    (ii) MOLECULE TYPE: peptide

    (xi) SEQUENCE DESCRIPTION: hGH 177-191 with Ala at 190

Leu Arg Ile Val Gln Cys Arg Ser Val Glu Gly Ser Cys Ala Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 18:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

    (ii) MOLECULE TYPE: peptide

    (xi) SEQUENCE DESCRIPTION: hGH 177-191 with Ala at 178

Leu Ala Ile Val Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 19:

  (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

  (ii) MOLECULE TYPE: peptide

  (xi) SEQUENCE DESCRIPTION: Tyr - hGH 177-191

  Tyr Leu Arg Ile Val Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Phe
   1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 20:

  (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

  (ii) MOLECULE TYPE: peptide

  (xi) SEQUENCE DESCRIPTION: Lys - hGH 177-191

  Lys Leu Arg Ile Val Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Phe
   1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 21:

  (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

  (ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: hGH 177-191 with Lys at 178

Leu Lys Ile Val Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 22:

   (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 15 amino acids
       (B) TYPE: amino acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: cyclic

   (ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: hGH 177-191 with Ala at 177

Ala Arg Ile Val Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 23:

   (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 15 amino acids
       (B) TYPE: amino acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: cyclic

   (ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: hGH 177-191 with Ala at 179

Leu Arg Ala Val Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 24:

   (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 15 amino acids
       (B) TYPE: amino acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: cyclic

   (ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: hGH 177-191 with Ala at 180

Leu Arg Ile Ala Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 25:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

    (ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: hGH 177-191 with Ala at 181

Leu Arg Ile Val Ala Cys Arg Ser Val Glu Gly Ser Cys Gly Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 26:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: hGH 177-191 with Ala at 182

Leu Arg Ile Val Gln Ala Arg Ser Val Glu Gly Ser Cys Gly Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 27:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

    (ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: hGH 177-191 with Ala at 184

Leu Arg Ile Val Gln Cys Arg <u>Ala</u> Val Glu Gly Ser Cys Gly Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 28:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

    (ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: hGH 177-191 with Ala at 185

Leu Arg Ile Val Gln Cys Arg Ser <u>Ala</u> Glu Gly Ser Cys Gly Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 29:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

    (ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: hGH 177-191 with Ala at 186

Leu Arg Ile Val Gln Cys Arg Ser Val <u>Ala</u> Gly Ser Cys Gly Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 30:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

    (ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: hGH 177-191 with Ala at 187

Leu Arg Ile Val Gln Cys Arg Ser Val Glu Ala Ser Cys Gly Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 31:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

    (ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: hGH 177-191 with Ala at 188

Leu Arg Ile Val Gln Cys Arg Ser Val Glu Gly Ala Cys Gly Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 32:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: hGH 177-191 with Ala at 189

Leu Arg Ile Val Gln Cys Arg Ser Val Glu Gly Ser Ala Gly Phe
1   5   10   15

(2) INFORMATION FOR SEQ ID NO: 33:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 17 amino acids
        (B) TYPE: amino acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: cyclic

    (ii) MOLECULE TYPE: peptide

    (xi) SEQUENCE DESCRIPTION: Lys-Lys- hGH 177-191

<u>Lys</u> <u>Lys</u> Leu Arg Ile Val Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Phe
  1   5   10   15